Domestic well sampling

Valley Water

2021 Annual Groundwater Quality Summary

Did you know that groundwater is an essential local water resource, providing about half of the water used in Santa Clara County and nearly all water used in South County? Valley Water is committed to ensuring sustainable water supplies now and in the future. Our 2021 groundwater quality testing indicates generally high water quality, and we are dedicated to protecting your water supplies.

Valley Water works to safeguard groundwater by:

- Replenishing groundwater with local and imported surface water to replace water pumped by well users.
- Reducing groundwater pumping through alternative water sources, water conservation and water recycling.
- Monitoring groundwater quality and water levels.
- Implementing programs to protect groundwater quality.

You can help protect groundwater by:

- Maintaining wells and septic systems.
- Avoiding the use or storage of potential contaminants near wells.
- Conserving water to help protect our largest drinking water reservoir, which is beneath our feet.

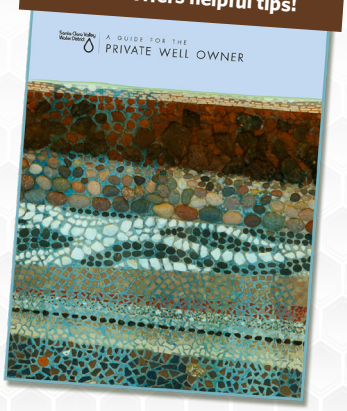
Clean Water • Healthy Environment • Flood Protection

What influences groundwater quality?

As water travels over the land and through the ground, it dissolves naturally occurring minerals and may also pick up substances from animal and human activities, such as:

- Inorganic compounds like salts and metals from natural or industrial sources, animal facilities, farming and mining.
- Organic chemicals from industrial processes, gas stations, dry cleaners, agricultural uses, and septic systems.
- Insecticides, herbicides and fertilizers from agricultural and residential uses.
- Viruses and bacteria from sewage treatment plants, sewer lines, septic systems, agricultural operations and wildlife.
- Radioactive elements that are naturally occurring.

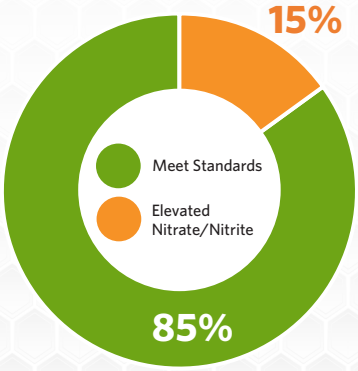
Our Guide for the Private Well Owner offers helpful tips!



How do I know if my water is safe?

State and federal drinking water standards identify contaminant levels that relate to health risks. Public water systems must meet these standards, but domestic wells are not regulated. Valley Water tests regional groundwater quality, but every property and well is unique, so we encourage domestic well owners to regularly test their water. The most common contaminant found in Santa Clara County is nitrate.

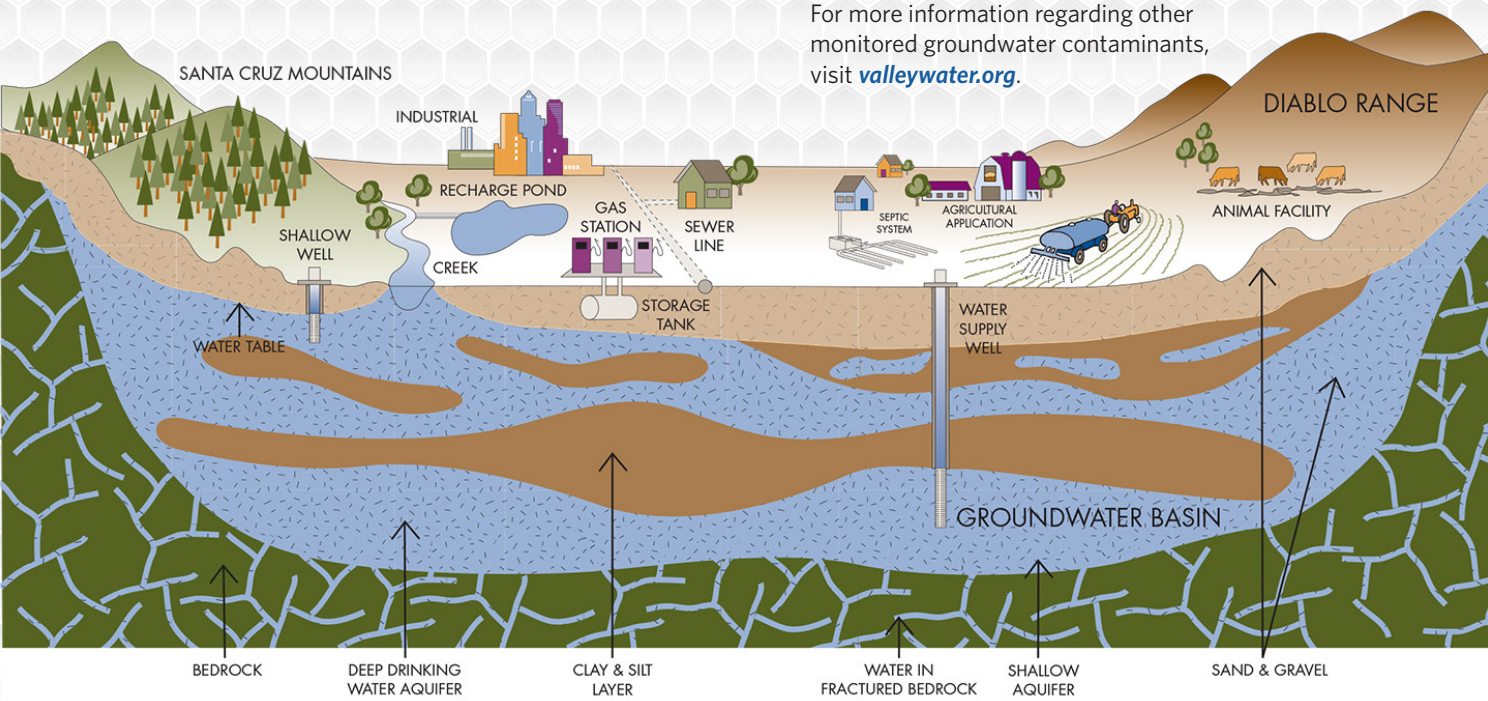
Water Supply Wells Tested Meeting Primary Drinking Water Standards



Notes:
1. Elevated nitrate and nitrite occur in groundwater due to sources like fertilizers and septic systems.
2. South County domestic wells are most often affected due to land use.

Nitrate is present above the drinking water standard in many South County domestic wells due to fertilizers, septic systems and livestock waste. Nitrate can interfere with the blood's ability to transport oxygen and is of greatest concern for infants and pregnant women as it can cause serious illness; symptoms include shortness of breath and blueness of the skin.

For more information regarding other monitored groundwater contaminants, visit ***valleywater.org***.



	Primary Drinking Water Standards	Units	MCL	Sources	North County Median	North County Range	South County Median	South County Range
Inorganic Contaminants	Aluminum	ppb	1,000	a	ND	ND - 278	ND	ND - 40
	Arsenic	ppb	10	a,b	ND	ND - 4	ND	ND - 8
	Barium	ppb	1,000	a	121	ND - 270	86	ND - 300
	Chromium (total)	ppb	50	a,b	ND	ND - 2	1.3	ND - 41
	Copper[1]	ppb	1,300	a,c	ND	ND - 5.2	3.8	ND - 63
	Fluoride (Natural Source)	ppm	2	a	0.12	ND - 0.67	0.13	ND - 1.1
	Lead[1]	ppb	15	a,b,c	ND	ND - 5.9	ND	ND - 7.5
	Nickel	ppb	100	a,b	ND	ND	ND	ND - 38
	Nitrite (as N)	ppb	1	a,d	ND	ND - 5.1	ND	ND
	Nitrate + Nitrite (as N)	ppm	10	a,d	3.4	0.67 - 7.5	4.8	0.4 - 9.7
	Nitrate (as N)	ppm	10	a,d	2.9	ND - 7.7	5.7	ND - 44
	Perchlorate	ppb	6	e	0.65	ND - 2.2	ND	ND - 5.2
	Selenium	ppb	50	a	ND	ND - 4	0.71	ND - 4.7
Radioactive Contaminants	Gross Alpha	pCi/L	15	a	0.8	ND - 3.5	0.62	ND - 0.85
	Uranium	pCi/L	20	a	ND	ND - 0.83	--	--
Volatile Organic Compounds	1,1,1-Trichloroethane (1,1,1-TCA)	ppb	200	b,f	ND	ND - 1.4	ND	ND
	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	ppb	1,200	b,f	ND	ND - 3	ND	ND
	1,1,2-Trichloroethane	ppb	5	b,f	ND	ND	ND	ND - 4.6
	1,1-Dichloroethene (1,1-DCE)	ppb	6	b	ND	ND - 0.73	ND	ND
	Di(2-Ethylhexyl) Adipate	ppb	400	b,f	ND	ND - 0.43	ND	ND
	Tetrachloroethene (PCE)	ppb	5	b,f	ND	ND	ND	ND - 2.1
					Present	Absent	Present	Absent
Microbiological Contaminants[2]	E. Coli Bacteria	P/A	--	g	0	10	2	107
	Total Coliform Bacteria	P/A	--	h	3	7	23	86
	Secondary Drinking Water Standards	**Units**	**MCL**	**Sources**	**Median**	**Range**	**Median**	**Range**
	Chloride	ppm	250	a,i	50	20 - 88	40	7.9 - 131
	Color	Color units	15	a	2	ND - 5	ND	ND - 20
	Foaming Agents (MBAS)	ppb	500	j	ND	ND - 52	ND	ND
	Iron	ppb	300	a,b	7.3	ND - 5,910	13	ND - 1,100
	Manganese	ppb	50	a,b	ND	ND - 150	0.41	ND - 270
	Odor Threshold	TON	3	a	ND	ND - 1	ND	ND - 1
	pH	pH units	6.5 - 8.5	a,k	7.6	6.7 - 8.2	7.4	6.9 - 8.1
	Specific Conductance	uS/cm	900	a,i	690	320 - 1,000	610	401 - 1,070
	Sulfate	ppm	250	a,b	40	1.5 - 88	39	ND - 128
	Total Dissolved Solids (TDS)	ppm	500	a	406	34 - 676	399	232 - 1,620
	Turbidity	NTU	5	l	0.15	ND - 4.6	0.20	ND - 14
	Zinc	ppb	5,000	a,b	ND	ND - 210	6.3	ND - 1,340

Water Quality Summary

In 2021, Valley Water evaluated data from over 340 public and private water supply wells. Nearly all wells tested meet drinking water standards.

This table summarizes results for detected parameters that have a drinking water standard. Not every well was tested for all substances listed. Comprehensive results are reported in the most recent Annual Groundwater Report at ***valleywater.org***. Maximum Contaminant Levels (MCLs) apply only to public water systems but are useful guidelines for domestic wells. This regional summary may not reflect the water quality in individual wells since every property and well is unique.

Table Notes

1) Lead and copper do not have MCLs, but have "action levels" as shown, and are regulated by the state for public water systems since they can adversely affect public health.

2) Public water systems are required to ensure that fewer than 5% of samples per month have total coliform present and that no samples have e. coli present. Domestic wells are not subject to these standards.

You live on a groundwater basin.

NORTH COUNTY
Generally extends north from Metcalf Road to San Francisco Bay.

SOUTH COUNTY
Extends from the Coyote Valley south to the Pajaro River.

Table Terms and Definitions

Maximum Contaminant Level (MCL): the highest level of a contaminant allowable in public water systems. Primary MCLs are health-based regulatory standards. Secondary MCLs are aesthetic standards and relate to the taste, odor, or appearance of drinking water.
Median: the "middle" value of the results, with half of the values above the median and half of the values below the median.
--: indicates there is no related drinking water standard or that the substance was not tested or detected.
ND: not detected (at laboratory reporting limit)
NTU: nephelometric turbidity units
P/A: Present/Absent
pCi/L: picoCuries per liter (a measure of radiation)
ppb: parts per billion (micrograms per liter)
ppm: parts per million (milligrams per liter)
pH units: measure of pH
TON: threshold odor number
uS/cm: microSiemens per centimeter (a measure of the dissolved inorganic salt content)

Typical Sources for Listed Contaminants

a: Erosion of natural deposits
b: Discharge of industrial and manufacturing wastes
c: Internal corrosion of household water plumbing systems
d: Agricultural runoff and leaching of fertilizers, septic tanks, and sewage
e: Solid rocket propellant, fireworks, explosives, flares, matches, and other industrial sources
f: Industrial process, dry cleaners, automotive repair shops, leaking underground fuel tanks, and other industrial sources
g: Human and animal fecal wastes
h: Naturally occurring in environment
i: Seawater influence
j: Municipal and industrial wastes
k: Carbon dioxide emissions; rainfall
l: Soil runoff

Valley Water Resources for Well Owners

Individual well owners are responsible for making sure their water is safe to drink, but Valley Water offers several resources to help.

Domestic Well Testing

Valley Water offers free water quality testing for eligible Santa Clara County domestic well users. Testing includes common contaminants like nitrate and bacteria.

Nitrate Frequently Asked Questions

For more information regarding nitrate, see Valley Water's Nitrate in Groundwater FAQ sheet.

Additional Resources

For more information about contaminants and potential health effects, the following resources are available:

- U.S. Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791
- California Division of Drinking Water ***waterboards.ca.gov/drinking_water/programs***
- Your healthcare provider

Contact Us

Should you have program questions or comments, please call Valley Water's Groundwater Hotline at **(408) 630-2300**.

To find out the latest information on Valley Water projects or to submit questions or comments, use our **Access Valley Water** customer request system at ***https://delivr.com/2yukx***.

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